



IT ROADMAP: SANTA CLARA

NETWORKWORLD
LIVE Conference & Expo

Panasonic ideas for life

Real-time Global Design Collaboration

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Agenda

- ◆ Who we are
- ◆ Challenges we faced
- ◆ The Solution
- ◆ Understanding the process
- ◆ Results
- ◆ Lessons Learned

Leaders in IC Chip Design

◆ Panasonic Emerging Advanced RF Laboratory (PEARL)

- Matsushita Electric Industries acquired Tropian in 2006 to create a global process for IC chip design
- Combine Tropian's unique Direct Polar Modulation technologies with its own system semiconductor, radio and amplifier capabilities, and its considerable experience in wireless communication systems.
- Goal: accelerate both R&D and commercialization efforts for wireless communication equipment and related key components.
- Presence in US and Japan

◆ Who is ArcScale?

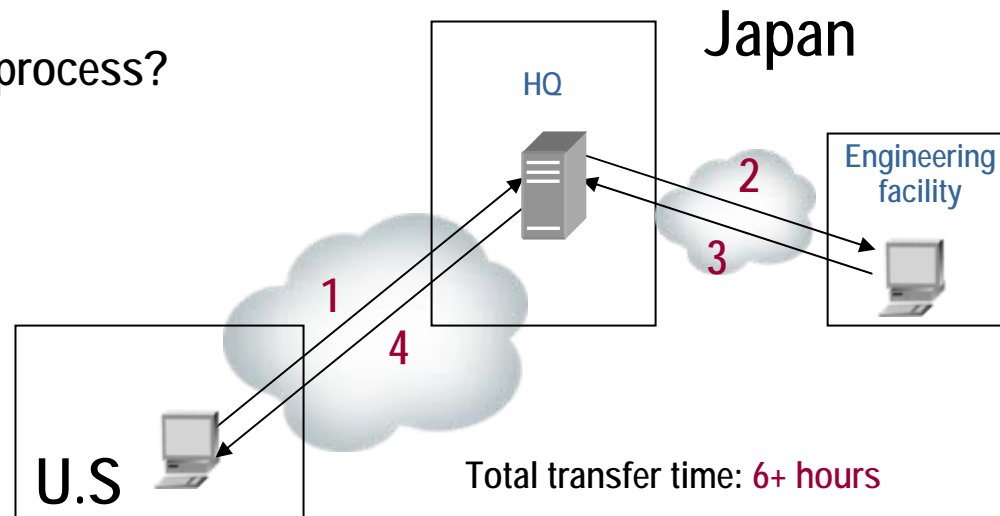
- Value Added Reseller in Silicon Valley focused on storage and high efficiency data centers
- Manage ITIL Service Desk for Panasonic R&D

The Challenge

- ◆ It's a complicated process to design IC chips
 - Different teams must collaborate – verification, synthesis, layout, etc.
- ◆ The Old Way of collaborating was SLOW, unreliable, and prone to errors
 - US engineer uploads file (1-2 GB) to an HQ ftp server in Japan (2 hours)
 - Japan engineer downloads file from HQ ftp server to local workstation (1 hour)
 - Japan engineer performs his work and then uploads to Japan HQ FTP server (1 hour)
 - US engineer downloads from Japan HQ FTP server (2 hour)

- ◆ Challenge: how can we streamline this process?

- Faster network connections
- Better reliability
- Reduce management costs
- Mandate to be ultra-secure



The Solution

- ◆ Implemented a Virtualized Server Infrastructure with SAN
 - Fewer devices to manage
 - More reliable hardware
 - Integrated remote management
 - Ability to easily scale up and out as needed
- ◆ Moved to Open source LINUX machines
- ◆ Deployed WAN acceleration
- ◆ High speed VPNs established between sites
- ◆ Version control software implemented
 - Central Vault at collocation
 - Mirror and Cache Servers at each location
 - Provide easy export control process
- ◆ Performed the above in accordance with ITIL standards and Industry Best Practices

The Process

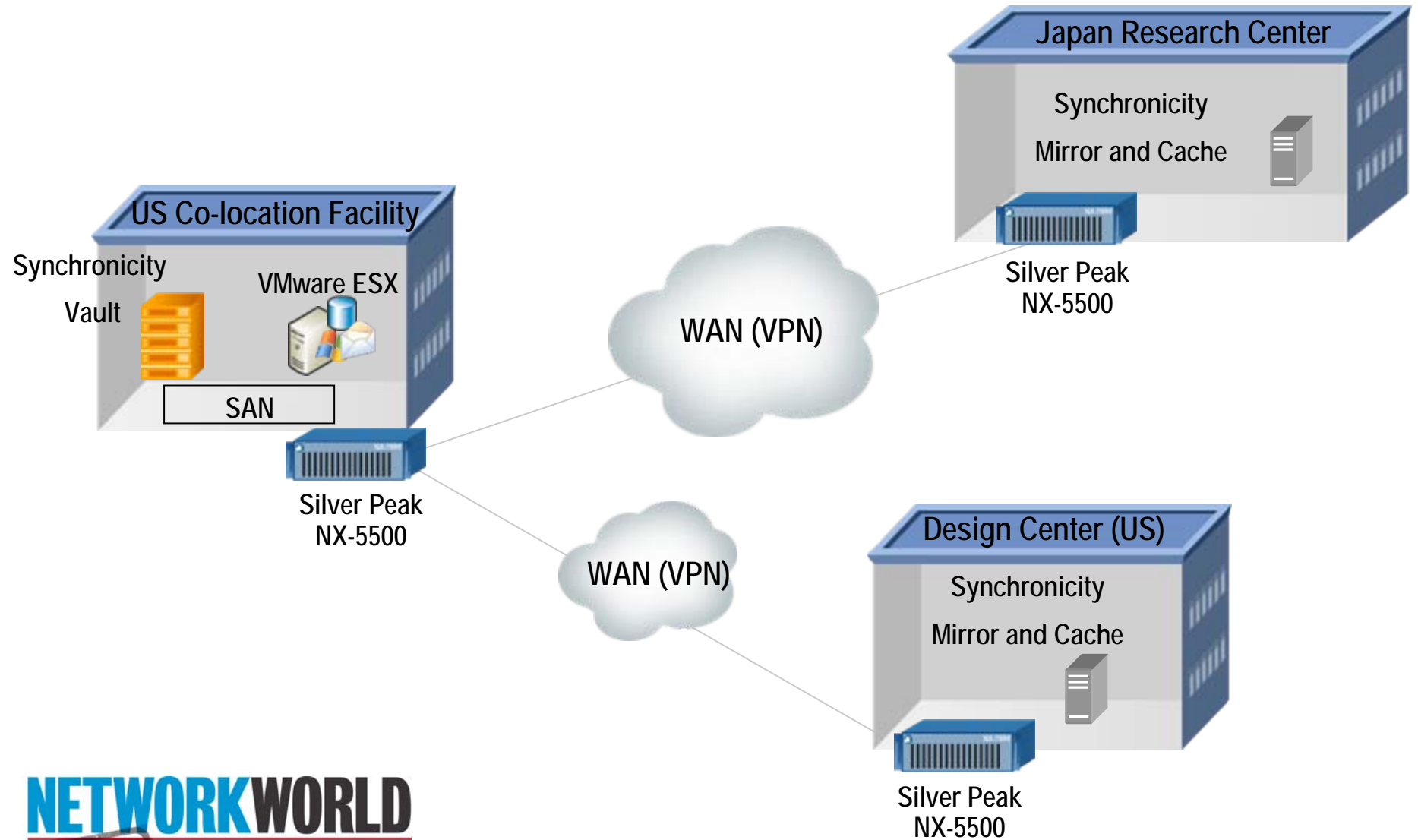
◆ Vendor selection criteria

- Wanted best of breed solutions
 - Silver Peak, Synchronicity, MatrixOne, HP, VMware ESX
 - One decision led to another – Cadence → MatrixOne → Silver peak → High Speed VPN
- Required established vendors with a presence in both US and Japan

◆ Timeline:

- 3 months for prototype
- 3 months for implementation
- 6 people involved (including vendors)

Network Design



Results

◆ Established a test bed and conducted the following tests:

- Raw ftp transfer (baseline)
- Synch of file with MatrixOne (baseline)
- FTP transfer with Silver Peak
- Synch with Silver Peak

◆ Results:

- 99%+ data reduction with Silver Peak
- 434 MB file replication reduced from 60 minutes to 9 minutes (5x using synchronicity)
- 400 MB FTP reduced from 49 minutes to 2 minutes (24x using FTP)
- Now doing real-time collaboration between engineering groups.

Application	LAN Traffic	WAN Traffic	LAN Rx Bytes	WAN Tx Bytes	Ratio (X)	Reduction
sync-2647	97.0%	45.9%	455,998,577	3,804,731	119.9	99.2%

Lessons Learned

- ◆ Think big – plan for future
 - Stick to the plan you create
 - Be patient (especially with a global company – time zones, language barriers...)
- ◆ Go with best of breed and industry best practices
 - Don't re-invent the wheel
- ◆ Internal marketing helps a lot
 - Good evangelizing can drum up needed support
 - Identify other initiatives within the company that can benefit from new technology
- ◆ Get the vendors involved – early and often
- ◆ Don't forget to baseline



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Thank You

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